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1. **AWARD.**—The right is reserved, as the interest of the Government may require, to reject any or all bids and to waive any minor informality or irregularity in bids received. The Government may accept any item or group of items of any bid unless qualified by specific limitation of the bidder. **UNLESS OTHERWISE PROVIDED IN THE SCHEDULE, BIDS MAY BE SUBMITTED FOR ANY QUANTITIES LESS THAN THOSE SPECIFIED; AND THE GOVERNMENT RESERVES THE RIGHT TO MAKE AN AWARD ON ANY ITEM FOR A QUANTITY LESS THAN THE QUANTITY BID UPON AT THE UNIT PRICE OFFERED UNLESS THE BIDDER SPECIFIES OTHERWISE IN HIS BID.** The contract shall be awarded to that responsible bidder whose bid, conforming to the Invitation for Bids, will be most advantageous to the Government, price and other factors considered. An award mailed (*or otherwise furnished*) to the successful bidder within the time for acceptance specified in the bid results in a binding contract without further action by either party.

2. **LABOR INFORMATION.**—Attention is invited to the possibility that wage determinations may have been made under the Walsh-Healey Public Contracts Act providing minimum wages for employees engaged in the manufacture for sale to the Government of the supplies covered by this Invitation for Bids. Information in this connection, as well as general information as to the requirements of the act concerning overtime payment, child labor, safety and health provisions, etc., may be obtained from the Wage and Hour and Public Contracts Divisions, Department of Labor, Washington 25, D. C. Requests for information should state the Invitation number, the issuing agency and the supplies covered.

3. **DISCOUNTS.**—(a) Prompt payment discounts will be included in the evaluation of bids, provided the period of the offered discount is sufficient to permit payment within such period in the regular course of business under the delivery, inspection, and payment provisions of the Invitation and Bid.

(b) In connection with any discount offered, time will be computed from date of delivery of the supplies to carrier when delivery and acceptance are at point of origin, or from date of delivery at destination or port of embarkation when delivery and acceptance are at either of those points, or from date correct invoice or voucher (*properly certified by the Contractor*) is received in the office specified by the Government if the latter date is later than the date of delivery.

4. **PRICES.**—Unit price for each unit bid on shall be shown and such unit price shall include packing unless otherwise specified. In each case totals shall be inserted in the Amount column of the Schedule.

5. **DELIVERY TIME.**—When not otherwise specified, bidder must definitely state time of proposed delivery.

6. **COMPUTATION OF TIME.**—Time, if stated as a number of days, will include Sundays and holidays.

7. **SAMPLES.**—Samples of items, when required, must be submitted within the time specified and at no expense to the Government; if not destroyed by testing, they will be returned at bidder's request and expense, unless otherwise specified in the Schedule.

8. **GOVERNMENT-FURNISHED PROPERTY.**—No material, labor, or facilities will be furnished by the Government unless otherwise provided in the Schedule.

9. **AGENTS.**—Bids signed by an Agent must be accompanied by evidence of his authority.

10. **BIDS.**—(a) **Data.** Each bidder shall furnish the information required by the Bid form. The bidder should print or type his name on the Schedule and each Continuation Sheet thereof upon which he makes an entry.

(b) **Corrections.** Erasures or other changes in bids must be explained or otherwise noted over signature of bidder.

(c) **Late.** No bid or modification thereof received after the time set for opening will be considered except that when a bid or modification arrives by mail after the time set for opening, but before award is made, and it is determined by the Government that nonarrival on time was due solely to delay in the mails for which bidder was not responsible, such bid or modification thereof will be considered.

(d) **Mistake.** Bidders are expected to examine the drawings, specifications, circulars, Schedule, and all instructions pertaining to the supplies or services. Failure to do so will be at the bidder's risk. In case of mistake in extension of price, the unit price will govern.

(e) **Alternate.** Alternate bids will not be considered unless authorized in the Schedule.

(f) **Addressing.** Except as provided in (g) below, bids and modifications thereof shall be enclosed in sealed envelopes addressed to the issuing office, with the name and address of the bidder, the date and hour of opening, and the Invitation Number on the face of the envelope.

(g) **Telegraphic.** Telegraphic bids will not be considered unless authorized in the Schedule, although bids may be modified by telegraphic notice provided such notice is received prior to the time set for the opening of the bids.

(h) **Withdrawal.** Bids may be withdrawn by written or telegraphic notice provided such notice is received prior to the time set for the opening of the bids.

11. **BONDS.**—No bond or other form of security will be required except as provided in the Schedule.

12. **SELLER'S INVOICES.**—Invoices shall be prepared and submitted in triplicate unless otherwise specified. Invoices shall contain the following information: Contract number, Order number (*if any*), and Item number; contract description of supplies or services, sizes, quantities, unit prices, and extended totals. Bill of lading number and weight of shipment will be shown for shipments made on Government bills of lading. The following certificate will be shown on each copy of the invoice:

"I certify that the above bill is correct and just and that payment therefor has not been received."

The Contractor or his authorized representative will sign **ONLY** the original (*ribbon typed copy, if typed*). When the invoice is signed or receipted in the name of a company or corporation, the name of the person signing, as well as the capacity in which he signs, must appear. For example: "John Doe Company, by John Smith, Secretary," "Treasurer," or as the case may be.

13. **NO BID.**—In the event no bid is to be submitted, **DO NOT** return the invitation unless otherwise specified. However, a letter or post card should be sent to the issuing office advising whether future invitations for the type of supplies or services covered by this invitation are desired.

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SECURITY INFORMATION

SCHEDULE "A"

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To:

Consignee:

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Amount</u>
	INVERTER POWER SUPPLY: D.C., UFI-10, in accordance with the attached specification entitled, "SPECIFICATION NO. 52-A-1024-A for RADIO POWER INVERTER UFI-10", dated 7 October 1952, as follows:				
1. (LIV12) 6125-0033007	Prototype, complete with component spares.	2	each	\$222.85	\$ 445.70
2. (LIV12) 6125-0033007	Same as item 1 as approved by the Contracting Officer, in writing, complete with component spares.	98	each	\$105.66	\$10,354.68
3. (LIV12.8) 6125-0033008	Maintenance spares.	10	sets	\$ 60.87	\$ 608.70
4.	Instruction and maintenance manual complete, one copy of which shall be directly reproducible.	125	each	For the sum of	\$ 236.70
5.	Manufacturing drawings, complete shall be directly reproducible.	1	set	No charge	
6.	Bill of materials, complete shall be directly reproducible.	1	each	No charge	
				TOTAL	\$11,645.78

Packing: Shall be packed for commercial domestic shipment.

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SECURITY INFORMATION

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Delivery: Items 1, 5 and 6 shall be delivered by the Contractor within 60 days after date of receipt of the contract by the Contractor.

Item 4 - Reproducible copy to be delivered with item 1 for approval. One copy of the approved manual to be shipped with each unit of item 2.

Items 2, 3 and the balance of item 4 shall be delivered by the Contractor as completed so as to complete the contract delivery within 60 days after date of receipt of the Contracting Officer's approval of item 1 by the Contractor.

Discount: In quoting cash discount for prompt payment, please allow at least 20 days in space indicated below:

Discount will be allowed for prompt payment as follows: _____ percent, _____ calendar days.

Order Handling Requirement: Stock numbers shown directly below the item numbers above must appear on all individual containers of this shipment.

Reports : With reference to General Provision 26 hereof, the Contractor shall submit each such report in triplicate.

Allotment No.
Redeliver to.
Reqa copy to.
Voucher No .
Reqa No .

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50X1

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SECURITY INFORMATION

1. DEFINITIONS

As used throughout this contract, the following terms shall have the meanings set forth below:

- (a) The term "Secretary" means the Secretary, the Under Secretary, or any Assistant Secretary of the Department, and the head or any assistant head of the executive agency; and the term "his duly authorized representative" means any person or persons or board (other than the Contracting Officer) authorized to act for the Secretary.
- (b) The term "Contracting Officer" means the person executing this contract on behalf of the Government, and any other officer or civilian employee who is a properly designated Contracting Officer; and the term includes, except as otherwise provided in this contract, the authorized representative of a Contracting Officer acting within the limits of his authority.
- (c) Except as otherwise provided in this contract, the term "subcontracts" includes purchase orders under this contract.

2. CHANGES

The Contracting Officer may at any time, by a written order, and without notice to the sureties, make changes, within the general scope of this contract, in any one or more of the following: (i) drawings, designs, or specifications, where the supplies to be furnished are to be specially manufactured for the Government in accordance therewith; (ii) method of shipment or packing; and (iii) place of delivery. If any such change causes an increase or decrease in the cost of, or the time required for, performance of this contract, an equitable adjustment shall be made in the contract price or delivery schedule, or both, and the contract shall be modified in writing accordingly. Any claim by the Contractor for adjustment under this clause must be asserted within 30 days from the date of receipt by the Contractor of the notification of change: *Provided, however,* That the Contracting Officer, if he decides that the facts justify such action, may receive and act upon any such claim asserted at any time prior to final payment under this contract. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes." However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

3. EXTRAS

Except as otherwise provided in this contract, no payment for extras shall be made unless such extras and the price therefor have been authorized in writing by the Contracting Officer.

4. VARIATION IN QUANTITY

No variation in the quantity of any item called for by this contract will be accepted unless such variation has been caused by conditions of loading, shipping, or packing, or allowances in manufacturing processes, and then only to the extent, if any, specified elsewhere in this contract.

5. INSPECTION

(a) All supplies (which term throughout this clause includes without limitation raw materials, components, intermediate assemblies, and end products) shall be subject to inspection and test by the Government, to the extent practicable at all times and places including the period of manufacture, and in any event prior to final acceptance.

(b) In case any supplies or lots of supplies are defective in material or workmanship or otherwise not in conformity with the requirements of this contract, the Government shall have the right either to reject them (with or without instructions as to their disposition) or to require their correction. Supplies or lots of supplies which have been rejected or required to be corrected shall be removed or corrected in place, as requested by the Contracting Officer, by and at the expense of the Contractor promptly after notice, and shall not again be tendered for acceptance unless the former tender and either the rejection or requirement of correction is disclosed. If the Contractor fails promptly to remove such supplies or lots of supplies, when requested by the Contracting Officer, and to proceed promptly with the replacement or correction thereof, the Government either (i) may by contract or otherwise replace or correct such supplies and charge to the Contractor the cost occasioned the Government thereby, or (ii) may terminate this contract for default as provided in the clause of this contract entitled "Default." Unless the Contractor elects to correct or replace the supplies which the Government has a right to reject and is able to make such correction or replacement within the required delivery schedule, the Contracting Officer may require the delivery of such supplies at a reduction in price which is equitable under the circumstances. Failure to agree to such reduction of price shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes."

(c) If any inspection or test is made by the Government on the premises of the Contractor or a subcontractor, the Contractor without additional charge shall provide all reasonable facilities and assistance for the safety and convenience of the Government inspectors in the performance of their duties. If Government inspection or test is made at a point other than the premises of the Contractor or a subcontractor, it shall be at the expense of the Government: *Provided,* That in case of rejection the Government shall not be liable for any reduction in value of samples used in connection with such inspection or test. All inspections and tests by the Government shall be performed in such a manner as not to unduly delay the work. The Government reserves the right to charge to the Contractor any additional cost of Government inspection and test when supplies are not ready at the time such inspection and test is requested by the Contractor. Final acceptance or rejection of the supplies shall be made as promptly as practicable after delivery, except as otherwise provided in this contract; but failure to inspect and accept or reject supplies shall neither relieve the Contractor from responsibility for such supplies as are not in accordance with the contract requirements nor impose liability on the Government therefor.

(d) The inspection and test by the Government of any supplies or lots thereof does not relieve the Contractor from any responsibility regarding defects or other failures to meet the contract requirements which may be discovered prior to final acceptance. Except as otherwise provided in this contract, final acceptance shall be conclusive except as regards latent defects, fraud, or such gross mistakes as amount to fraud.

(e) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the supplies hereunder. Records of all inspection work by the Contractor shall be kept complete and available to the Government during the performance of this contract and for such longer period as may be specified elsewhere in this contract.

6. RESPONSIBILITY FOR SUPPLIES

Except as otherwise provided in this contract, (i) the Contractor shall be responsible for the supplies covered by this contract until they are delivered at the designated

delivery point, regardless of the point of inspection; and (ii) the Contractor shall bear all risks as to rejected supplies after notice of rejection.

7. PAYMENTS

The Contractor shall be paid, upon the submission of properly certified invoices or vouchers, the prices stipulated herein for supplies delivered and accepted or services rendered and accepted, less deductions, if any, as herein provided. Unless otherwise specified, payment will be made on partial deliveries accepted by the Government when the amount due on such deliveries so warrants; or, when requested by the Contractor, payment for accepted partial deliveries shall be made whenever such payment would equal or exceed either \$1,000 or 50 percent of the total amount of this contract.

8. ASSIGNMENT OF CLAIMS

(a) Pursuant to the provisions of the Assignment of Claims Act of 1940 (31 U. S. Code 203, 41 U. S. Code 15), if this contract provides for payments aggregating \$1,000 or more, claims for moneys due or to become due the Contractor from the Government under this contract may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency, and may thereafter be further assigned and reassigned to any such institution. Any such assignment or reassignment shall cover all amounts payable under this contract and not already paid, and shall not be made to more than one party, except that any such assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in such financing. Notwithstanding any provision of this contract, payment to an assignee of any claim under this contract shall not be subject to reduction or set-off for any indebtedness of the Contractor to the Government arising independently of this contract. *(The preceding sentence applies only if this contract is with a military department.)*

(b) In no event shall copies of this contract or of any plans, specifications, or other similar documents relating to work under this contract, if marked "Top Secret," "Secret," "Confidential," or "Restricted," be furnished to any assignee of any claim arising under this contract or to any other person not entitled to receive the same: *Provided*, That a copy of any part or all of this contract so marked may be furnished, or any information contained therein may be disclosed, to such assignee upon the prior written authorization of the Contracting Officer.

9. ADDITIONAL BOND SECURITY

If any surety upon any bond furnished in connection with this contract becomes unacceptable to the Government, or if any such surety fails to furnish reports as to his financial condition from time to time as requested by the Government, the Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the Government and of persons supplying labor or materials in the prosecution of the work contemplated by this contract.

10. FEDERAL, STATE, AND LOCAL TAXES

(a) *Definitions.*—As used throughout this clause, the following terms shall have the meanings set forth below:

(i) The term "direct tax" means any tax or duty directly applicable to the completed supplies or services covered by this contract, or any other tax or duty from which the Contractor or this transaction is exempt. It includes any tax or duty directly applicable to the importation, production, processing, manufacture, construction, sale, or use of such supplies or services; it also includes any tax levied on, with respect to, or measured by sales, receipts from sales, or use of the supplies or services covered by this contract. The term does not include transportation taxes, unemployment compensation taxes, social security taxes, income taxes, excess-profits taxes, capital stock taxes, property taxes, and such other taxes as are not within the definition of the

term "direct tax" as set forth above in this paragraph.

(ii) The term "contract date" means the effective date of this contract if it is a negotiated contract, or the date set for the opening of bids if it is a contract entered into as a result of formal advertising.

(b) *Federal Taxes.*—Except as may be otherwise provided in this contract, the contract price includes all applicable Federal taxes in effect on the contract date.

(c) *State or Local Taxes.*—Except as may be otherwise provided in this contract, the contract price does not include any State or local direct tax in effect on the contract date.

(d) *Evidence of Exemption.*—The Government agrees, upon request of the Contractor, to furnish a tax exemption certificate or other similar evidence of exemption with respect to any direct tax not included in the contract price pursuant to this clause; and the Contractor agrees, in the event of the refusal of the applicable taxing authority to accept such evidence of exemption, (i) promptly to notify the Contracting Officer of such refusal, (ii) to cause the tax in question to be paid in such manner as to preserve all rights to refund thereof, and (iii) if so directed by the Contracting Officer, to take all necessary action, in cooperation with and for the benefit of the Government, to secure a refund of such tax (in which event the Government agrees to reimburse the Contractor for any and all reasonable expenses incurred at its direction).

(e) *Price Adjustment.*—If, after the contract date, the Federal Government or any State or local government either (i) imposes or increases (or removes an exemption with respect to) any direct tax, or any tax directly applicable to the materials or components used in the manufacture or furnishing of the completed supplies or services covered by this contract, or (ii) refuses to accept the evidence of exemption, furnished under paragraph (d) hereof, with respect to any direct tax excluded from the contract price, and if under either (i) or (ii) the Contractor is obliged to and does pay or bear the burden of any such tax (and does not secure a refund thereof), the contract price shall be correspondingly increased. If, after the contract date, the Contractor is relieved in whole or in part from the payment or the burden of any direct tax included in the contract price, or any tax directly applicable to the materials or components used in the manufacture or furnishing of the completed supplies or services covered by this contract, the Contractor agrees promptly to notify the Contracting Officer of such relief, and the contract price shall be correspondingly decreased or the amount of such relief paid over to the Government. Invoices or vouchers covering any increase or decrease in contract price pursuant to the provisions of this paragraph shall state the amount thereof, as a separate added or deducted item, and shall identify the particular tax imposed, increased, eliminated, or decreased.

(f) *Refund or Drawback.*—If any tax or duty has been included in the contract price or the price as adjusted under paragraph (e) of this clause, and if the Contractor is entitled to a refund or drawback by reason of the export or re-export of supplies covered by this contract, or of materials or components used in the manufacture or furnishing of the completed supplies or services covered by this contract, the Contractor agrees that he will promptly notify the Contracting Officer thereof and that the amount of any such refund or drawback obtained will be paid over to the Government or credited against amounts due from the Government under this contract: *Provided, however*, That the Contractor shall not be required to apply for such refund or drawback unless so requested by the Contracting Officer.

11. DEFAULT

(a) The Government may, subject to the provisions of paragraph (b) below, by written Notice of Default to the

GENERAL PROVISIONS**(Supply Contract)**

Contractor terminate the whole or any part of this contract in any one of the following circumstances:

(i) if the Contractor fails to make delivery of the supplies or to perform the services within the time specified herein or any extension thereof; or

(ii) if the Contractor fails to perform any of the other provisions of this contract, or so fails to make progress as to endanger performance of this contract in accordance with its terms, and in either of these two circumstances does not cure such failure within a period of 10 days (or such longer period as the Contracting Officer may authorize in writing) after receipt of notice from the Contracting Officer specifying such failure.

(b) The Contractor shall not be liable for any excess costs if any failure to perform the contract arises out of causes beyond the control and without the fault or negligence of the Contractor. Such causes include, but are not restricted to, acts of God or of the public enemy, acts of the Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, and defaults of subcontractors due to any of such causes unless the Contracting Officer shall determine that the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the Contractor to meet the required delivery schedule.

(c) In the event the Government terminates this contract in whole or in part as provided in paragraph (a) of this clause, the Government may procure, upon such terms and in such manner as the Contracting Officer may deem appropriate, supplies or services similar to those so terminated, and the Contractor shall be liable to the Government for any excess costs for such similar supplies or services, *Provided*, That the Contractor shall continue the performance of this contract to the extent not terminated under the provisions of this clause.

(d) If this contract is terminated as provided in paragraph (a) of this clause, the Government, in addition to any other rights provided in this clause, may require the Contractor to transfer title and deliver to the Government, in the manner and to the extent directed by the Contracting Officer, (i) any completed supplies, and (ii) such partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing materials") as the Contractor has specifically produced or specifically acquired for the performance of such part of this contract as has been terminated; and the Contractor shall, upon direction of the Contracting Officer, protect and preserve property in possession of the Contractor in which the Government has an interest. The Government shall pay to the Contractor the contract price for completed supplies delivered to and accepted by the Government, and the amount agreed upon by the Contractor and the Contracting Officer for manufacturing materials delivered to and accepted by the Government and for the protection and preservation of property. Failure to agree shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes."

(e) If, after notice of termination of this contract under the provisions of paragraph (a) of this clause, it is determined that the failure to perform this contract is due to causes beyond the control and without the fault or negligence of the Contractor pursuant to the provisions of paragraph (b) of this clause, such Notice of Default shall be deemed to have been issued pursuant to the clause of this contract entitled "Termination for Convenience of the Government," and the rights and obligations of the parties hereto shall in such event be governed by such clause. *(Except as otherwise provided in this contract, this paragraph (e) applies only if this contract is with a military department.)*

(f) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

12. DISPUTES

Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Contracting Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. Within 30 days from the date of receipt of such copy, the Contractor may appeal by mailing or otherwise furnishing to the Contracting Officer a written appeal addressed to the Secretary, and the decision of the Secretary or his duly authorized representative for the hearing of such appeals shall be final and conclusive: *Provided*, That if no such appeal is taken, the decision of the Contracting Officer shall be final and conclusive. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the contract and in accordance with the Contracting Officer's decision.

13. NOTICE AND ASSISTANCE REGARDING PATENT INFRINGEMENT

(a) The Contractor agrees to report to the Contracting Officer, promptly and in reasonable written detail, each claim of patent infringement based on the performance of this contract and asserted against it, or against any of its subcontractors if it has notice thereof.

(b) In the event of litigation against the Government on account of any claim of infringement arising out of the performance of this contract or out of the use of any supplies furnished or construction work performed hereunder, the Contractor agrees that it will furnish to the Government, upon request, all evidence and information in its possession pertaining to the defense of such litigation. Such information shall be furnished at the expense of the Government except in those cases in which the Contractor has agreed to indemnify the Government against the claim being asserted.

14. BUY AMERICAN ACT

The Contractor agrees that there will be delivered under this contract only such unmanufactured articles, materials, and supplies (which term "articles, materials, and supplies" is hereinafter referred to in this clause as "supplies") as have been mined or produced in the United States, and only such manufactured supplies as have been manufactured in the United States substantially all from supplies mined, produced, or manufactured, as the case may be, in the United States. Pursuant to the Buy American Act (41 U. S. Code 10a-c), the foregoing provision shall not apply (i) with respect to supplies excepted by the Secretary from the application of that Act, (ii) with respect to supplies for use outside the United States, (iii) with respect to the supplies to be delivered under this contract which are of a class or kind determined by the Secretary or his duly authorized representative not to be mined, produced, or manufactured, as the case may be, in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality, or (iv) with respect to such supplies, from which the supplies to be delivered under this contract are manufactured, as are of a class or kind determined by the Secretary or his duly authorized representative not to be mined, produced, or manufactured, as the case may be, in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality, provided that this exception (iv) shall not permit delivery of supplies manufactured outside the United States if such supplies are manufactured in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality.

In connection with the performance of work under this contract, the Contractor agrees not to employ any person undergoing sentence of imprisonment at hard labor.

16. EIGHT-HOUR LAW OF 1912

This contract, to the extent that it is of a character specified in the Eight-Hour Law of 1912 as amended (40 U. S. Code 324-326) and is not covered by the Walsh-Healey Public Contracts Act (41 U. S. Code 35-45), is subject to the following provisions and exceptions of said Eight-Hour Law of 1912 as amended, and to all other provisions and exceptions of said Law:

No laborer or mechanic doing any part of the work contemplated by this contract, in the employ of the Contractor or any subcontractor contracting for any part of the said work, shall be required or permitted to work more than eight hours in any one calendar day upon such work, except upon the condition that compensation is paid to such laborer or mechanic in accordance with the provisions of this clause. The wages of every such laborer and mechanic employed by the Contractor or any subcontractor engaged in the performance of this contract shall be computed on a basic day rate of eight hours per day; and work in excess of eight hours per day is permitted only upon the condition that every such laborer and mechanic shall be compensated for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay. For each violation of the requirements of this clause a penalty of five dollars shall be imposed upon the Contractor for each such laborer or mechanic for every calendar day in which such employee is required or permitted to labor more than eight hours upon said work without receiving compensation computed in accordance with this clause; and all penalties thus imposed shall be withheld for the use and benefit of the Government.

17. WALSH-HEALEY PUBLIC CONTRACTS ACT

If this contract is for the manufacture or furnishing of materials, supplies, articles, or equipment in an amount

subject to the Walsh-Healey Public Contracts Act as amended (41 U. S. Code 35-45), there are hereby incorporated by reference all representations and stipulations required by said Act and regulations issued thereunder by the Secretary of Labor, such representations and stipulations being subject to all applicable rulings and interpretations of the Secretary of Labor which are now or may hereafter be in effect.

18. NONDISCRIMINATION IN EMPLOYMENT

In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, or national origin; and further agrees to insert the foregoing provision in all subcontracts hereunder except subcontracts for standard commercial supplies or for raw materials.

19. OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

20. COVENANT AGAINST CONTINGENT FEES

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this contract without liability or in its discretion to deduct from the contract price or consideration the full amount of such commission, percentage, brokerage, or contingent fee.

U. S. GOVERNMENT PRINTING OFFICE 69-16-60696-1

GENERAL PROVISIONS

(Continued)

21. GUARANTY

The Contractor guarantees that at the time of delivery thereof, the articles and/or equipment provided for under this contract will be free from any defects in material or workmanship and will conform to the requirements of this contract. Notice of any such defect or nonconformance shall be given by the Government to the Contractor within one year of the delivery of the defective or nonconforming article and/or equipment. If required by the Government within a reasonable time after such notice, the Contractor shall with all possible speed correct or replace the defective or nonconforming article and/or equipment or part thereof. When such correction or replacement requires transportation of the article and/or equipment or part thereof, shipping costs, not exceeding usual charges from the delivery point to the Contractor's plant and return, shall be borne by the Contractor; the Government shall bear all other shipping costs. This Guaranty shall then continue as to corrected or replacing articles and/or equipment or parts thereof, until one year after the date of redelivery. If the Government does not require correction or replacement of a defective or nonconforming article and/or equipment or a part thereof, the Contractor,

if required by the Contracting Officer within a reasonable time after the notice of defect or nonconformance shall repay such portion of the contract price of the article as is equitable in the circumstances.

22. REPORTING OF ROYALTIES

If this contract is in an amount which exceeds \$10,000, the Contractor agrees to report in writing to the Contracting Officer, during the performance of this contract and prior to its completion or final settlement, the amount of any royalties or royalty rates paid or to be paid by it directly to others in connection with the performance of this contract, together with the names and addresses of licensors to whom such payments are made and either the patent numbers involved or such other information as will permit identification of the patents or other basis on which royalties are to be paid. Where the Contractor's compliance with the foregoing reporting requirement is found by the Contracting Officer to be impracticable because of the size of the Contractor's business or because of the nature of its accounting procedures, the Contractor may furnish one or more reports, based on its established accounting periods

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(Supply Contract)

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and covering the entire contract period, of royalties in excess of \$1,000 (if computed on an annual basis) paid or to be paid to each licensor on the Contractor's over-all business, together with such other information as will permit identification of the patents or other basis on which royalties are to be paid, in which event the Contractor shall furnish the Contracting Officer, upon his request and at Government expense, an allocation of such royalty payments to Government business or to the work or supplies covered by this contract; reference to any such periodic royalty reports, previously furnished to any Government agency and covering the period of performance of this contract, shall constitute compliance with the reporting requirement of this clause.

23. PATENT INDEMNITY

(a) The Contractor agrees to indemnify the Government and its officers, agents and employees against liability, including costs and expenses, for infringement upon any Letters Patent of the United States (except Letters Patent issued upon an application which is now or may hereafter be, for reasons of national security, ordered by the Government to be kept secret or otherwise withheld from issue) arising out of the performance of this contract or out of the use or disposal by or for the account of the Government of supplies furnished or construction work performed hereunder. The foregoing indemnity shall not apply unless the Contractor shall have been informed as soon as practicable by the Government of the suit or action alleging such infringement, and shall have been given an opportunity to present recommendations as to the defense thereof; and further, such indemnity shall not apply in any one of the following situations: (i) any infringement resulting from the addition to any such supplies of other supplies not furnished by the Contractor for the purpose of such addition; (ii) any settlement of a claim of infringement made without the consent of the Contractor, unless required by final decree of a court of competent jurisdiction; (iii) any claim of infringement arising from use or disposal outside the scope of any license limitation under which the Contractor is bound: *Provided*, That the Contractor has notified the Government of the limitation prior to first delivery under this contract; (iv) any infringement necessarily resulting from changes (other than the substitution of another standard commercial part or component manufactured or supplied by the Contractor) ordered pursuant to this contract, or from specific written instructions given by the Contracting Officer directing a manner of performing the contract not normally utilized by the Contractor.

(In the event that the above is inapplicable to items or parts thereof under this contract which are not standard commercial supplies, said items should be

distinguished by listing them under the following statement.)

(b) The foregoing shall not apply to the following contract items or parts thereof, which are not standard commercial supplies.

24. GRATUITIES

(a) The Government may, by written notice to the contractor, terminate the right of the contractor to proceed under this contract if it is found, after notice and hearing, by the Secretary or his duly authorized representative, that gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by the contractor, or any agent or representative of the contractor, to any officer or employee of the Government with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing, of such contract: *Provided*, That the existence of the facts upon which the Secretary or his duly authorized representative makes such findings shall be in issue and may be reviewed in any competent court.

(b) In the event this contract is terminated as provided in paragraph (a) hereof, the Government shall be entitled (i) to pursue the same remedies against the contractor as it could pursue in the event of a breach of the contract by the contractor, and (ii) as a penalty in addition to any other damages of which it may be entitled by law, to exemplary damages in an amount (as determined by the Secretary or his duly authorized representative) which shall be not less than 3 nor more than 10 times the costs incurred by the contractor in providing any such gratuities to any such officer or employee.

(c) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

25. TERMINATION FOR CONVENIENCE OF THE GOVERNMENT

(a) The performance of work under this contract may be terminated by the Government in accordance with this clause in whole, or from time to time in part, whenever the Contracting Officer shall determine that such termination is in the best interests of the Government. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work under the contract is terminated, and the date upon which such termination becomes effective.

(b) After receipt of a Notice of Termination, and except as otherwise directed by the Contracting Officer, the Contractor shall (1) stop work under the contract on the date and to the extent specified in the Notice of Termination; (2) place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the work under the contract as is not terminated; (3) terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination; (4) assign to the Government, in the manner, at the times, and to the extent directed by the Contracting Officer, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated; (5) settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Contracting Officer, to the extent he may require, which approval or ratification shall be final for all the purposes of this clause; (6) transfer title and deliver to the Government, in the manner, at the times, and to the extent, if any, directed by the Contracting Officer, (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination, and (ii) the completed or partially completed plans, drawings, information, and other property which, if the contract had been completed, would have been required to be furnished to the Government; (7) use its best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by the Contracting Officer, any property of the types referred to in provision (6) of this paragraph: *Provided, however*, that the Contractor (i) shall not be required to extend credit to any purchaser, and (ii) may acquire any such property under the conditions prescribed by and at a price or prices approved by the Contracting Officer: *And provided further* that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Government to the Contractor under this Contract or shall otherwise be credited to the price or cost of the work covered by this contract or paid in such other manner as the Contracting Officer may direct; (8) complete performance of such part of the work as shall not have

been terminated by the Notice of Termination; and (9) take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation of the property related to this contract which is in the possession of the Contractor and in which the Government has or may acquire an interest. At any time after expiration of the plant clearance period, as defined in Section VIII, Armed Services Procurement Regulation, as it may be amended from time to time, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of any or all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorized by the Contracting Officer, and may request the Government to remove such items or enter into a storage agreement covering them. Not later than fifteen (15) days thereafter, the Government will accept title to such items and remove them or enter into a storage agreement covering the same: *Provided*, That the list submitted shall be subject to verification by the Contracting Officer upon removal of the items, or if the items are stored, within forty-five (45) days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.

(c) After receipt of a Notice of Termination, the Contractor shall submit to the Contracting Officer its termination claim, in the form and with the certification prescribed by the Contracting Officer. Such claim shall be submitted promptly but in no event later than two years from the effective date of termination, unless one or more extensions in writing are granted by the Contracting Officer, upon request of the Contractor made in writing within such two-year period or authorized extension thereof. However, if the Contracting Officer determines that the facts justify such action, he may receive and act upon any such termination claim at any time after such two-year period or any extension thereof. Upon failure of the Contractor to submit its termination claim within the time allowed, the Contracting Officer may determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

(d) Subject to the provisions of paragraph (c), the Contractor and the Contracting Officer may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this clause, which amount or amounts may include a reasonable allowance for profit on work done. The contract shall be amended accordingly, and the Contractor shall be paid the agreed amount. Nothing in paragraph (e) of this clause, prescribing the amount to be paid to the Contractor in the event of failure of the Contractor and the Contracting Officer to agree upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this clause, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts

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which may be agreed upon to be paid to the Contractor pursuant to this paragraph (d).

(e) In the event of the failure of the Contractor and the Contracting Officer to agree as provided in paragraph (d) upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this clause, the Contracting Officer shall determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall pay to the Contractor the amounts determined as follows:

(1) For completed supplies accepted by the Government (or sold or acquired as provided in paragraph (b) (7) above) and not theretofore paid for, a sum equivalent to the aggregate price for such supplies computed in accordance with the price or prices specified in the contract, appropriately adjusted for any saving of freight or other charges;

(2) The total of—

(i) The costs incurred in the performance of the work terminated, including initial costs and preparatory expense allocable thereto, but exclusive of any costs attributable to supplies paid or to be paid for under paragraph (e) (1) hereof;

(ii) The cost of settling and paying claims arising out of the termination of work under subcontracts or orders, as provided in paragraph (b) (5) above, which are properly chargeable to the terminated portion of the contract (exclusive of amounts paid or payable on account of supplies or materials delivered or services furnished by subcontractors or vendors prior to the effective date of the Notice of Termination, which amounts shall be included in the costs payable under (i) above).

(iii) A sum equal to 2% of that part of the amount determined under (i) which represents the cost of articles and materials not processed by the Contractor, plus a sum equal to 8% of the remainder of such amount, but the aggregate of such sums shall not exceed 6% of the whole of the amount determined under subdivision (i) above, which amount for the purpose of this subdivision (iii) shall exclude any charges for interest on borrowings.

(3) The reasonable costs of settlement, including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the contract and for the termination and settlement of subcontracts thereunder, together with reasonable storage, transportation, and

other costs incurred in connection with the protection or disposition of property allocable to this contract. The total sum to be paid to the Contractor under (1) and (2) of this paragraph (e) shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. Except for normal spoilage, and except to the extent that the Government shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor as provided in paragraph (e) (1) and paragraph (e) (2) (i), the fair value, as determined by the Contracting Officer, in connection with property which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government, or to a buyer pursuant to paragraph (b) (7).

(f) Any determination of costs under paragraph (c) or (e) hereof shall be governed by the Statement of Principles for Consideration of Costs set forth in Part 4 of Section VIII of the Armed Services Procurement Regulation, as in effect on the date of this contract.

(g) The Contractor shall have the right of appeal, under the clause of this contract entitled "Disputes," from any determination made by the Contracting Officer under paragraphs (c) or (e) above, except that if the Contractor has failed to submit its claim within the time provided in paragraph (c) above and has failed to request extension of such time, he shall have no such right of appeal. In any case where the Contracting Officer has made a determination of the amount due under paragraph (c) or (e) above, the Government shall pay to the Contractor the following: (i) if there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by the Contracting Officer, or (ii) if an appeal has been taken, the amount finally determined on such appeal.

(h) In arriving at the amount due the Contractor under this clause there shall be deducted (1) all unliquidated advance or other unliquidated payments on account theretofore made to the Contractor, (2) any claim which the Government may have against the Contractor in connection with this contract, and (3) the agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the Contractor or sold, pursuant to the provisions of this clause, and not otherwise recovered by or credited to the Government.

(i) If the termination hereunder be partial, prior to the settlement of the terminated portion of this contract, the Contractor may file with the Contracting Officer a request in writing for an equitable adjustment of the price or prices specified in the contract relating to the continued portion of the con-

tract (the portion not terminated by the Notice of Termination), and such equitable adjustment as may be agreed upon shall be made in such price or prices.

(j) The Government may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this contract whenever in the opinion of the Contracting Officer the aggregate of such payments shall be within the amount to which the Contractor will be entitled hereunder. If the total of such payments is in excess of the amount finally agreed or determined to be due under this clause, such excess shall be payable by the Contractor to the Government upon demand, together with interest computed at the rate of 6% per annum, for the period from the date such excess payment is received by the Contractor to the date on which such excess is repaid to the Government: *Provided, however, That no interest shall be charged with respect to any such excess payment attributable to a reduction in the Contractor's claim by reason of retention or other disposition of termination inventory until ten days after the date of such retention or disposition.*

(k) Unless otherwise provided for in this contract, or by applicable statute, the Contractor, from the effective date of termination and for a period of six years after final settlement under this contract, shall preserve and make available to the Government at all reasonable times at the office of the Contractor but without direct charge to the Government, all its books, records, documents, and other evidence bearing on the costs and expenses of the Contractor under this contract and relating to the work terminated hereunder, or, to the extent approved by the Contracting Officer, photographs, micro-photographs, or other authentic reproductions thereof.

26. REPORTS

Where the delivery schedule is for a period of 60 days or more the Contractor shall submit at intervals of 30 days from receipt of contract, reports of progress in performance of the contract relative to manufacturing, shipping schedule, etc., in order that the Contracting Officer may have a current record of the status of the performance. *It is important that the Contractor comply with this requirement.*

27. CEILING PRICES

Contractor agrees that the prices invoiced hereunder will not exceed the lower of (i) the contract prices of (ii) any applicable ceiling prices established by the Office of the Price Stabilization or other authorized Government Agency.

28. PACKING AND PROCESSING CHARGES

The prices herein include all charges for packing and processing in accordance with the provisions of this contract.

29. IDENTIFICATION AND MARKING OF SHIPMENTS

I. General:

A. It is an express condition of this contract that the contractor will make no reference of any nature to the purchaser in connection with

the shipment of materials or the shipping documents pertaining to this contract. This includes, but it is not limited to the items being furnished, instruction books, blueprints, manuals, packing lists, instruction plates or identification plates. Neither shall there be any reference to the purchaser on or in any shipping container, shipping documents or billing documents.

II. Bills of Lading:

A. The Bill of Lading shall show the consignee as cited on Schedule "A" of the contract.

III. Exterior Markings:

A. No stenciling shall be applied to the shipping container except for the following:

- (1) Weight, dimensions and cubic content of container
- (2) Caution markings for handling purposes, such as; "DELICATE INSTRUMENT", "THIS SIDE UP", "FRAGILE", AND "CENTER OF BALANCE" (on large items), and etc.

B. The consignee address as given above in paragraph II A shall be marked on a shipping tag or label that shall be securely fixed on the container by use of a waterproof adhesive or stapled to the container. Such markings shall be protected by a coat of transparent water-repellant material.

C. Container Numbering

- (1) Each exterior container shall bear a number relative to the total number of containers in the shipment, e.g. PKG. 1 of 5.
- (2) Set marking — where an equipment item constitutes a set, and is packed and shipped unassembled in two or more separate pieces, each container shall be marked with the set or assembly number, the number of the container relative to the number of containers comprising the complete set, and the total number of containers in the particular set or assembly, together with a brief description of the component part contained therein. Thus, a box containing a control panel which is the *third* container of a *group of four* making up set number *two* would require the following special set markings: Set No. 2, Package 3 of 4, Control Panel.
- (3) *Container numbering shall not be stenciled on the containers but shall be applied by tag or label as described in paragraph III B.*

IV. Interior Markings:

A. No markings shall be applied on any interior packaging material or container that would identify the purchaser.

B. Each primary wrapper, envelope, bag, folding carton or other packaging material, enclosing each assembly, part or group of similar parts shall be marked or labeled so that it may

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be readily identified against the packing list. Each secondary and all other overwrap material shall be marked as to the contents enclosed in the package. The markings shall include the following:

- (1) One of the following headings:
 - a. Part of basic unit (removed to facilitate packing).
 - b. Operating Spare Parts
 - c. Base Spare Parts
 - d. Tools
 - e. Service Equipment
 - f. Other category indicated in the contract.
- (2) Brief Nomenclature
- (3) Stock Number
- (4) Quantity

Items that are not enclosed in a wrapper or carton shall be identified with a tag that includes the above information.

V. Packing Lists

A. A master packing list shall accompany each shipment or be forwarded under separate cover so that it reaches the consignee prior to the receipt of the shipment. The master packing list shall include:

- (1) Name and address of consignor
- (2) Name and address of consignee as in paragraph II A above
- (3) Contract or Purchase order number
- (4) Government Bill of Lading Number covering the shipment if any
- (5) Items being shipped shall be listed as required under one or more of the headings listed in paragraph IV B (1) above
- (6) Stock and item number
- (7) Nomenclature of item
- (8) Quantity of each item
- (9) Location of each item by container number and set number when applicable
- (10) Any data specifically required to be included on the packing list, by the terms of the contract.

- B. (1) Each box shall include a packing list on the inside of the package and on the outside of the container.

The packing slip that is provided for the exterior of the container shall be placed in a waterproof envelope and stapled or nailed to the wood box, in such a manner as to avoid nailing or stapling through the packing list. The packing list shall be taped to the container where the shipping container is a corrugated carton.

- (2) *The names of the purchaser and consignee, and the contract or purchase order numbers shall not appear on the packing slips provided for each individual shipping container, either interior or exterior. The packing list shall include the following:*

- a. Applicable heading as listed in paragraph IV B (1)
- b. Nomenclature of Item
- c. Stock and Item Number
- d. Quantity of each item in the container
- e. Set cross reference — where an equipment item constitutes a set, and is packed and shipped unassembled in two or more separate pieces, the packing list will include the necessary cross reference data to facilitate the identification of the various components of the set as being one or more complete sets.

VI. Unassembled Items**A. Identification of connection components**

When it is necessary to remove components to facilitate packing, all connecting wires, conduits, leads and other objects disconnected shall be tagged in such a manner so as to readily identify lines of the various components.

B. Shipping bolts, collars and etc.

All objects that are attached to assemblies for packing purposes that require removal before the item can be put in operation, shall be labelled accordingly in a conspicuous manner.

The following Clauses are attached hereto and made a part hereof before execution by the parties hereto;

30. Security

The provisions of "Contractor's Security Agreement" and "Security Requirements for Contractors" accepted and agreed to by the Contractor are hereby incorporated by reference.

(Continued on page 10)

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SECURITY INFORMATION

31. Filing of Patent Applications

32. Security Requirements

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SECURITY INFORMATION

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SECURITY INFORMATION

FILING OF PATENT APPLICATIONS.

(a) While and so long as the subject matter of this contract is classified "Secret" or higher, the Contractor agrees that, before filing or causing to be filed a patent application disclosing any of said subject matter, it will refer the proposed application to the Contracting Officer for determination whether, for reasons of national security, such application should be kept secret or the issuance of a patent thereunder otherwise delayed, under pertinent statutes or regulation; and the Contractor agrees to observe any instructions given by the Contracting Officer in this regard, which instructions may include a direction not to file such application so long as the Contracting Officer considers that such filing would jeopardize national security. If the Contracting Officer directs the Contractor not to file such application, the Contractor may submit to the Contracting Officer a written request, addressed to the Head of the Agency or his authorized representative, for reconsideration of such direction, but pending action by the Head of the Agency or his authorized representative, the Contractor shall observe such instruction.

(b) While and so long as the subject matter of this contract is classified "Confidential" or higher, and if the Contracting Officer determines that there is no other practical means for maintaining the security of said subject matter, the Contractor agrees to assign and convey to the Government upon request the entire rights, title and interest in and to each United States patent application disclosing said subject matter and filed by or on behalf of the Contractor, the title to the assigned patent application to be held in trust by the Government, subject to reversion of the entire rights, title and interest therein to the Contractor (i) upon allowance of the said application and payment of the final fee, or (ii) upon the mailing of notice by the Contracting Officer to the Contractor that disclosure of the subject matter of the application will no longer jeopardize security. Nothing contained in this paragraph shall (A) apply to any patent application assigned to the Government under any other provision of this contract, or (B) enlarge or diminish the rights granted to or reserved by the Government or the Contractor with respect to said application or the invention covered thereby, except to the extent expressly provided in this clause.

(c) While and so long as the subject matter of this contract is classified "Confidential", the Contractor agrees to furnish to the Contracting Officer, at the time of or prior to filing or causing to be filed a patent application disclosing any of said subject matter, a copy of such application for determination whether, for reasons of national security, such application should be kept secret or the issuance of a patent thereunder otherwise delayed, under pertinent statutes or regulations; and the Contractor agrees to observe any instructions of the Contracting Officer in this regard.

(d) While and so long as the subject matter of this contract is classified "Restricted", the Contractor shall be governed by the provisions of the clause of the contract entitled "Security Requirements".

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ARTICLE 32. SECURITY REQUIREMENTS.

(a) Disclosure of Information. It is understood that disclosure of information relating to the work contracted for hereunder, to any person not entitled to receive it, or failure to safeguard all secret, confidential, and restricted matter that may come to the Contractor or any person under his control in connection with the work under this contract, may subject the Contractor, his agents, employees and subcontractors to criminal liability under the laws of the United States (Act of 25 June 1948, c.645, 62 Stat. 862, as amended). See "Contractor's Security Agreement", and "Security Requirements for Contractors" which are incorporated herein by reference only.

(b) Employment of Aliens. No aliens employed by the Contractor shall be permitted to have access to the plans or specifications, or the work under construction, or to participate in the contract trials, without the written consent beforehand of the Contracting Officer.

(c) Security Note. Only the association of the purchaser (and Contracting Officer) with the end product under this contract is classified information. The classification is "Secret". Actual performance in the fabrication of the end product will be unclassified. The Contractor shall take the necessary measures to prevent the association of the purchaser (and Contracting Officer) with this contract by anyone but the minimum number of managerial personnel required to have such information.

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Specification No. 52-A-1024-A

COPY _____ OF _____ COPIES

SPECIFICATION NO. 52-A-1024-A

for

RADIO POWER INVERTER UPI-10

7 October 1952

CONFIDENTIAL

1.

SCOPE

This specification shall describe the construction and production testing of a 65-watt power inverter. This unit shall convert 220-volt DC to 220-volt AC.

2.

APPLICABLE SPECIFICATIONS AND DRAWINGS

2.1.

QQ-P-416	Plating Cadmium (Electro-deposited).
QQ-S-571	Solder; Tin-Lead.
MIL-P-15037A	Plastic Material, Laminated Thermosetting, Sheets, Glass Cloth, Melamine Resin.
JAN-T-152	Treatment, Moisture and Fungus-Resistant, of Communications Electronic and Associated Electrical Equipment: General, Process For.
JAN-C-173	Coating Materials: Moisture- and Fungus-Proofing for Treatment of Communications, Electronic and Associated Equipment.
JAN-C-76	Cable (Hook-up Wire) Electrical, Insulated, Radio and Instrument.
16FA (SHIPS)	Electronic Equipment, Naval Ship and Shore, General Specification.

2.2.

The following drawings are furnished and are a part of this specification:

2074	Parts List
2074-1	Schematic Diagram
2074-2	Outline Drawing of Inverter Case
2074-3	Transformer Specification
2074-4	Transformer Coil
2074-5	Specification Drawings, L1 and L2

2.2. 2074-6 Specification Drawings, L3 and L4

2074-7 Vibrator Wave Form

3. REQUIREMENTS

3.1. ELECTRICAL

3.1.1. Description

The UPI-10 is a low power inverter employing a standard commercial vibrator of the interrupter type. A center tapped Auto-Transformer is used and the AC voltage (220 volts AC, RMS) is taken off the winding. Both the DC and the AC output leads are filtered to eliminate the conduction and radiation of hash generated by the inverter.

3.1.2. Characteristics

The UPI-10 shall operate from 220-volt DC mains. The output voltage under the fully loaded conditions (65 watts) shall be 220 plus or minus 5 volts RMS. The overall efficiency shall not be less than 87 per cent. The output wave form shall conform to Drawing 2074-7 and shall not show excessive chattering or arcing. The closure time shall be at least 60 per cent.

3.1.3. Components

The component parts shall be of high-grade, commercially-available units.

3.1.3.1. Condensers

Condensers subject to high-transient voltages (C5, C6, and C7) shall be the hermetically sealed type equivalent to Aerovox type PL232G or Cornell Dubilier "Sealpup." The filter capacitors shall be of the pressure-sealed type equivalent to the "MM"

3.1.3.1. series of the latter manufacturer or the 89ZXY series of the former manufacturer. Where 0.01 MF ceramic condensers are specified, a voltage rating of 600 volts DCW shall be required.

3.1.3.2. Resistors
Carbon resistors shall be standard Allen Bradley or Ohmite "Little Devils." Wire-wound resistors may be either Sprague Koolohm or Ohmite "Greenhorn" or equivalent.

3.1.3.3. Filter Chokes
The filter chokes shall be as specified in drawings 2074-5 and 2074-6 and be wound of nylon Formvar insulated litz wire. These coils shall be thoroughly impregnated as described in the above drawings.

3.1.3.4. Transformer
The transformer shall be wound as specified in Drawings 2074-3 and 2074-4. The minimum wire diameter which shall be used is AGW-28-SE. The coil shall be thoroughly varnish-vacuum-impregnated and the core securely tied to the mounting studs to prevent lamination vibration. The no-load voltage ratio shall be 1:1.27.

3.1.3.5. Terminal Strips
Terminal strips shall be made of a grade of glass-base melamine meeting specification MIL-P-15037A or laminated bakelite treated per JAN-T-152 and JAN-C-173.

3.2. MECHANICAL REQUIREMENTS

3.2.1.

Case Size

The case dimensions shall not exceed those shown in Drawing No. 2074-2.

3.2.2.

Case Construction

The case shall be made of 20 gauge sheet steel. The seams shall be spot welded or brazed. The cover screw holes shall line up properly with the case holes and the cover shall seat flush at all surfaces to insure adequate shielding.

3.2.3.

Welds

Welds shall meet the requirements of Paragraph 3.20 of the Bureau of Ships Specification 16EM (General Specification for Electronic Equipment).

3.2.4.

Plating and Painting

The case, brackets, and cover shall be cadmium plated according to Paragraph 3.42.4 of the above specification. Two coats of flat black enamel shall be baked on after the dichromate treatment.

3.2.5.

Cover Screws

The cover screws shall be of the binder-head type. Either sufficient materials shall be debossed in the cover flange to allow the tapping of $3\frac{1}{2}$ threads or Tinnerman-type nuts shall be spot-welded to the underside of the flange.

3.2.6.

Vibrator Clamp

The vibrator clamp shall be riveted to the mounting bracket.

It is preferable that the spring fingers extend about the socket a full 360 degrees. The vibrator rim shall fit securely into the vibrator clamp. The vibrator reed shall be oriented perpendicular to gravity when the 4-7/8 inch by 7-5/8 inch surface of the case is on the table.

3.2.7.

Switch Handle

The switch handle shall be no greater than 1/2 inch in length.

3.2.8.

Schematic Diagram

Drawing 2074-1 shall be reduced in size, shall have the title block removed, and shall be printed on heavy white bond paper and fixed to the inside cover of the case. This drawing shall be treated to prevent deterioration by moisture or fungus.

3.2.9.

Nomenclature and Operating Instructions

The nomenclature and operating instructions shown on Drawing 2074-2 shall be applied by the silk screening process.

3.2.10.

Workmanship

The workmanship standards shall conform to Paragraph 3.49 of Specification 16E4.

3.3.

SPARE PARTS

3.3.1.

Component Spares

One each vibrator type 22064 (ATR) and five each 2 amp type 3AG fuses shall be packed with each Inverter, UP1-10.

3.3.2.

Maintenance Spares

There shall be one set of maintenance spare parts for each ten UPI-10 units. Each set of maintenance spare parts shall consist of the following:

10 each	Vibrators, Type 22064 (ATE)
1 each	Transformer, per Specification Drawings 2074-3 and 2074-4
2 each	Chokes, per Specification Drawing 2074-5
2 each	Chokes, per Specification Drawing 2074-6
2 each	Condenser, Paper, Hermetically Sealed, 0.1 MF., 600 volts, DCW
4 each	Condenser, Paper, Hermetically Sealed, 0.25 MF., 600 volts, DCW
4 each	Condenser, Ceramic, Disk, 0.01 MF., 600 volts, DCW
2 each	Condenser, Paper, 0.5 MF., 400 volts, DCW
2 each	Condenser, Paper, 0.1 MF., 400 volts, DCW
50 each	Fuse, Type, 3AG, 2 amps.

3.4.

PACKING AND PACKAGING

3.4.1.

General

The UPI-10 and spare parts shall be packed in accordance with JAN-P-658. Preservation shall be carried out according to Method 1A of JAN-P-116.

3.4.2.

UPI-10
~~UPI-1~~ Packing

Each UPI-10 with spare vibrator and fuses shall be inserted in a V or W board box conforming to JAN-P-108 with all seams sealed with acetate tape conforming to JAN-P-127. Adequate partitioning and cushioning shall be provided to protect the individual items.

3.4.2.1.

Marking

A list of the contents of the above container shall be pasted on the top in such a manner that the list is preserved when the sealing tape is stripped off. This packing list shall

3.4.2.1. include quantities, reference numbers, part numbers, and the description. The description shall give the name of the component, type of component, value of capacity, tolerance, and voltage rating, etc.

3.4.2.2. Preservation

The above container shall be inserted in a waterproof, flexible case liner conforming to JAN-P-117, Type II, Grade A, Class (d), and shall be properly evacuated before heat sealing.

3.4.2.3. Case Packing

The above package shall be inserted into a plywood box conforming to JAN-P-105. Plywood used shall be moisture- and fungus-resistant. Four Inverters shall be so packed in each case. A packing list in triplicate shall be inserted in an envelope and attached firmly to the outside of this shipping container.

3.4.3. Maintenance Spares Packing

Each item, or group of the same items, in a set of spare parts shall be wrapped according to the following instructions:

3.4.3.1. Wrapping Instructions

Wrapping material shall conform to Grade C, Type 1 or Type 2, of JAN-P-121. The entire wrapping shall be applied to conform as closely as possible to the contour of the part and to include the practicable minimum of air volume. Irregularly shaped parts with sharp edges or corners shall have the external wrap protectively cushioned against these sharp edges or corners

3.4.3.1. with cushioning material conforming to Grade A or C of JAN-P-121.

3.4.3.2. Item Marking

Each of the above items or groups of the same item shall be plainly identified as to quantity, reference number, part number, and description. The description shall give the name of the component, value or capacity, tolerance and voltage rating, etc.

3.4.3.3. Unit Packing

Each set of spare parts (There shall be ten sets) shall be inserted in a V or W board box conforming to JAN-P-108 with all seams sealed with acetate tape conforming to JAN-P-127. Adequate partitioning and cushioning shall be provided to protect the individually packaged parts.

3.4.3.4. Set Marking

A list of the contents of the above container shall be pasted to the top of the container in such a manner that the list is preserved when the sealing tape is stripped off. This packing list shall include quantities, reference numbers, part numbers, and the description as indicated in Paragraph 3.4.3.1.

3.4.3.5. Preservation

The above container shall be inserted in a waterproof, flexible, case liner conforming to JAN-P-117, Type II, Grade A, Class (d), and shall be properly evacuated before heat sealing.

3.4.3.6.

Case Packing

Two sets of spare parts preserved as above shall be packed in a plywood box conforming to JAN-P-105. Plywood used shall be moisture- and fungus-resistant. A packing list in triplicate shall be inserted in an envelope and attached firmly to the outside of this shipping container.

4.

PRODUCTION TESTS

4.1.

TRANSFORMER TESTS

Each transformer as received from the supplier shall be visually inspected for impregnation, core stacking, and lead anchorage. A source of 220-volt AC (RMS) shall be applied to either side of the primary and the output voltage shall be 280 volts plus or minus 3 per cent (RMS).

4.2.

EFFICIENCY TEST

With the inverter delivering 65 watts to an RS-6 equipment, or equivalent load, the power input shall not be less than 215 volts RMS, the equivalent of 380 volts DC as delivered by the RP-6 power supply. The no load peak voltage shall not exceed 300 volts. These tests shall be run on each inverter unit.

4.3.

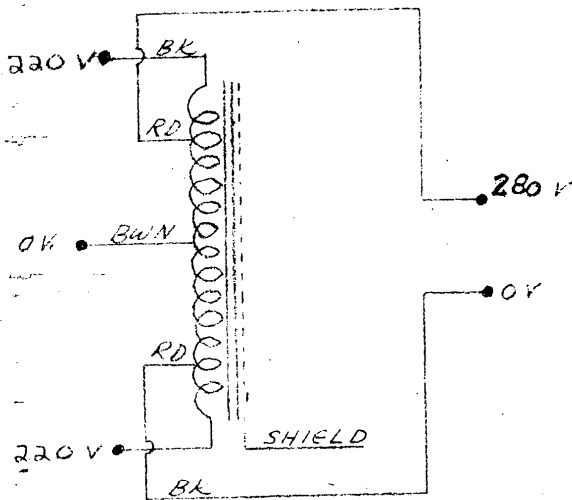
WAVE FORM

The output wave form of each inverter shall be inspected for 60 per cent minimum closure. Units found with excessive contact chatter or bounce should be inspected for faulty components.

4.4.

HASH RADIATION

The hash radiation from the inverters shall not exceed the radiation from the model supplied. The measurement shall be made by measuring the audio output from the type RR-6 receiver, which will be supplied to the contractor.



60 CYCLE NO LOAD
VOLTAGE RATIO

ELECTRICAL SPECIFICATIONS

1. WITH 220 V AC APPLIED EITHER SIDE OF CENTER TAP THE OUTPUT VOLTAGE SHALL BE $280 \text{ V} \pm 3\%$
2. THE TRANSFORMER SHALL NOT BREAK-DOWN WITH 1000V APPLIED BETWEEN THE WINDING AND THE CORE, THE SHIELD AND THE CORE OR THE WINDING

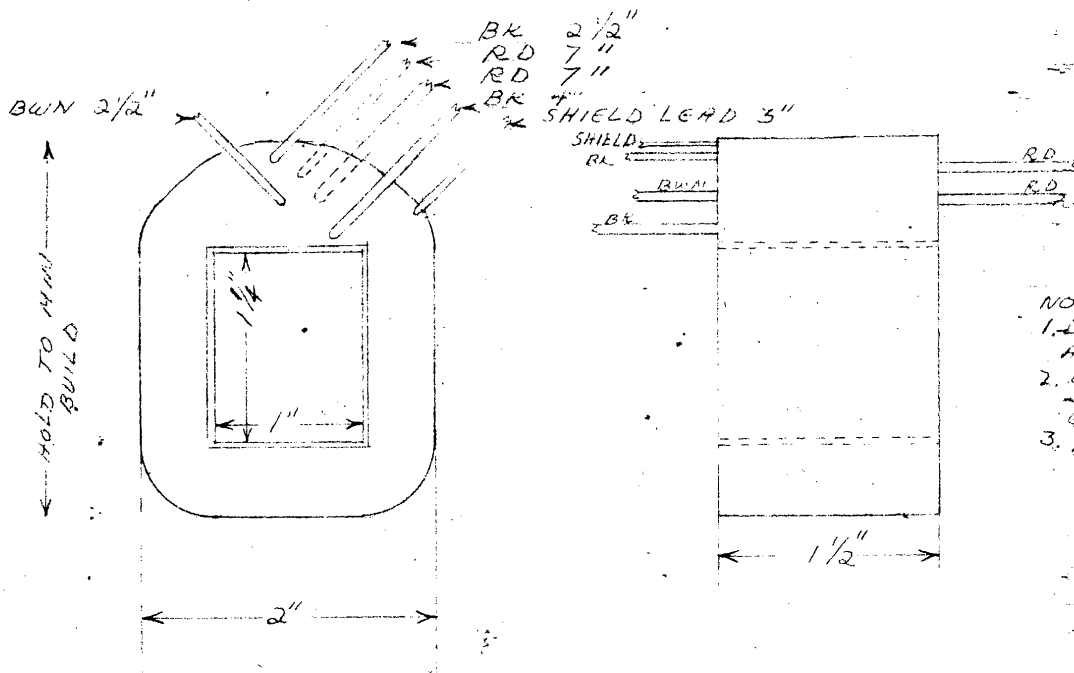
CONSTRUCTION

1. THE CORE SHALL BE STACKED BUTT JOINT TO A DEPTH OF $1/4$ " WITH TRANSFORMER ADHESIVE "A".
2. THE TRANSFORMER SHALL BE VARNISH VACUUM IMPREGNATED
3. LEADS SHALL BE AGW 20, STRANDED AND COLOR CODED. THEY SHALL BE AS SPECIFIED PER DWG 2074-6

WINDING DATA

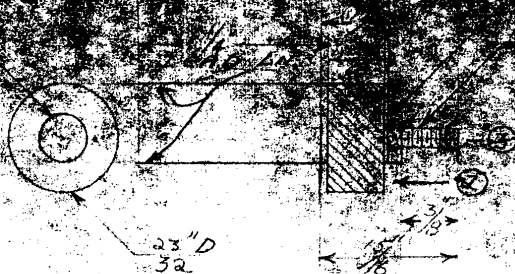
WOUND OVER	CONDUCTOR MATERIAL AND SIZE	TURNS	TAPS	URNS PER LAYER	NO LAYERS	WIRE TRAVERSE	INSULATION BETWEEN LAYERS	SHIELD AND INSULATION OVER COIL
1" X 1/4" .030" TUBING	AGW #28 SE. .0139" D	2160	385 1080 1775	90	22	1.25"	.002" KRAFT	.002" COPPER FOIL .005" FISH

NO	MODIFICATIONS	DR BY 9-29-52 JTS	SCALE NONE
		CH BY 10-14-52 GLG	AUTO
			TRANSFORMER
			DWG 2074-3



- NOTES
1. LEADS SHALL BE AWG #20 STRANDED
 2. WIRE INSULATION SHALL BE FUSIONERT, GLASS OR VINYL
 3. 1/8" SHALL BE SKINNED AND TINNED

NO	MODIFICATIONS	DR BY- 9-29-52 ASS	SCALE 1"=1"
		CH BY 10-14-52 GLG	TRANSFORMER COIL
			2074-4



COIL TREATMENT

- 1 DRY FINISHED COIL 100°C FOR 1 HR.
- 2 BRUSH OR SPRAY IMPREGNATION INSULEX U-85-T ON COIL AND FORM. COATING THICKNESS 1 TO 1.5 MILLS
- 3 DRAIN AND AIR DRY 10-15 MINUTES
- 4 BAKE AT 100°C FOR 30 MINUTES

DRIVER 35
CAM GEAR 1/16
CAM 1/16

APPROX. TURNS 300
RESISTANCE (DC) 5.8Ω
INDUCTANCE 1.78 mH
@ 1 KC.

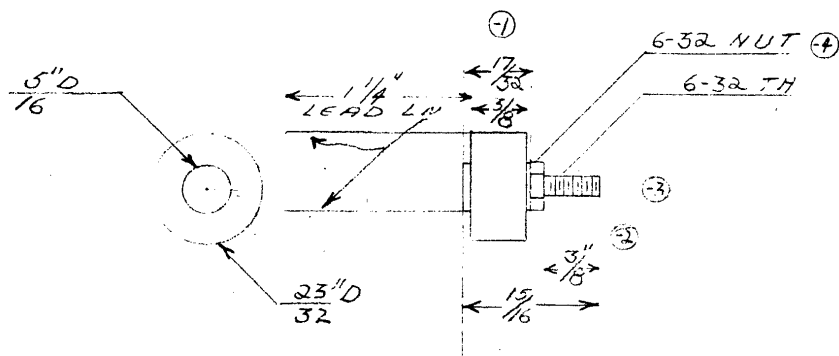
WIRE 10/41 LITE-
SINGLE NYLON-
FORM VAR.

CORE MATERIAL-
STACKPOOL-BLG,
SK-28.

INSULATE COIL FROM CORE
-002" SLEEVE

-1 CHOKER, ASSEMBLY 1EA.
-1 COIL 1EA.
-1 FORM, PANDERED IRON 1EA.
-1 NUT, 6-32, BRASS 1EA.

NO	MODIFICATIONS	DR. BY 9-29-52 HJS	SCALE - 1" = 1"
		CH BY 10-14-52 GLG	HASH CHOKER L1, L2
			DWG NO 2074-5



COIL TREATMENT

- 1 DRY FINISHED COIL 100°C FOR 1 HR.
- 2 BRUSH OR SPRAY IMPREGNATION INSULEX U-85-T ON COIL AND FORM. COATING THICKNESS 1 TO 1.5 MILLS
3. DRAIN AND AIR DRY 10-15 MINUTES
- 4 BAKE AT 100°C FOR 30 MINUTES

WINDING DATA

DRIVER 25
CAM GEAR 78
CAM .375"

APPROX TURNS 200
RESISTANCE (DC) 23Ω
INDUCTANCE .84 mH ± 5%
@ 1 KC

WIRE- 15/41 LITZ-

SINGLE NYLON

FORMVAR-

CORE MATERIAL-

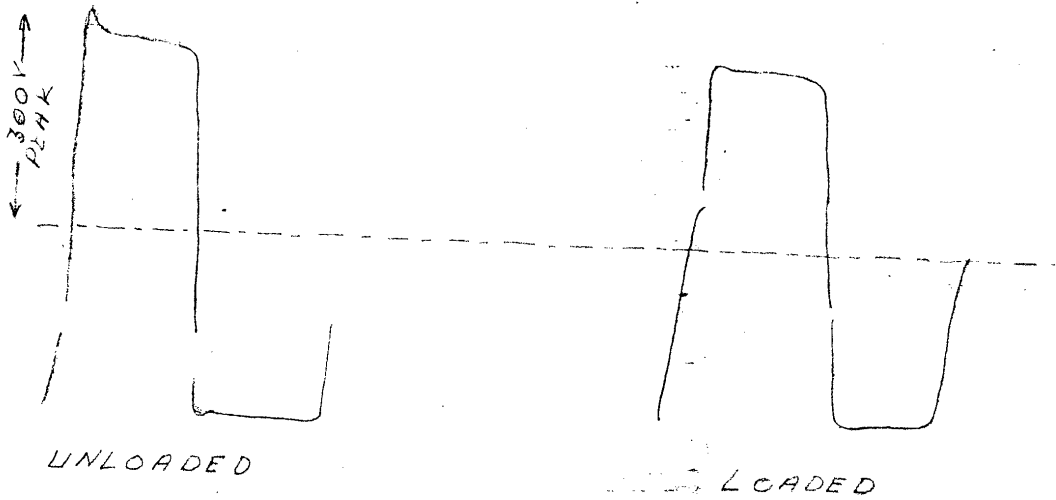
STACKPOOL Z26,

SK-28

INSULATE COIL FROM CORE
.002 SLEEVE

-1 CHOKE ASSEMBLY 1 EA.
-2 COIL 1 EA.
-3 FORM POWDERED IRON 1 EA.
-4 NUT 6-32, BRASS 1 EA.

NO	MODIFICATIONS	DR BY: 9-29-52 AJS	SCALE-1"=1"
		CH BY 10-14-52 GLG	HASH CHOKE L3, L4
			2074-6



NO	MODIFICATIONS	DRBY 10-1-52 GLG	SCALE NONE
		CHBY 10-14-52 RPS	VIBRATOR
			WAVE FORM
			DWG NO
			2074-7

UPI-10 INVERTER PARTS LIST

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Reference No.	No.	Part	Description
C1, C2, C10, C11	4	Condenser	Ceramic, .01 MF., 600 V, DCW
C3, C4	2	Condenser	Paper .5MF., 400 V, DCW
C5	1	Condenser	Paper, Hermetically Sealed, .1 MF. 600 V, DCW
C6, C7	2	Condenser	Paper, Hermetically Sealed, .25 MF., 600 V, DCW
C8, C9	2	Condenser	Paper, .1 MF., 400 V, DCW
R1	1	Resistor	Carbon, 1900 Ohm, 2 watt
R2	1	Resistor	Wire wound, 2000 Ohm, 10 Watt
R3, R4	2	Resistor	Carbon, 10K Ohm, 1 Watt
R5, R6	2	Resistor	Carbon 250 Ohm, 2 Watt
VIB	1	Vibrator	220 volt, (American Television and Radio Type 22064)
T1	1	Transformer	Auto type, 220-220V., See Specifications
L1, L2	2	Chokes	Powdered iron core, 1.78 MH., See Specifications
L3, L4	2	Chokes	Powdered iron core, .84 MH., See Specifications
SW1	1	Switch	Toggle, SPST, 220 V
F	1	Fuseholder	3AG Screwdriver, (Littlefuse 10758) with 3AG 2 A. Fuse.
PL-1	1	D. C. Plug	Moulded European Type Plug and Line Cord. (Nat. Elec. Mach. Shop)
J-1	1	Receptacle	2 Pole Universal. (Amphenol Type 61-MIP-61F)

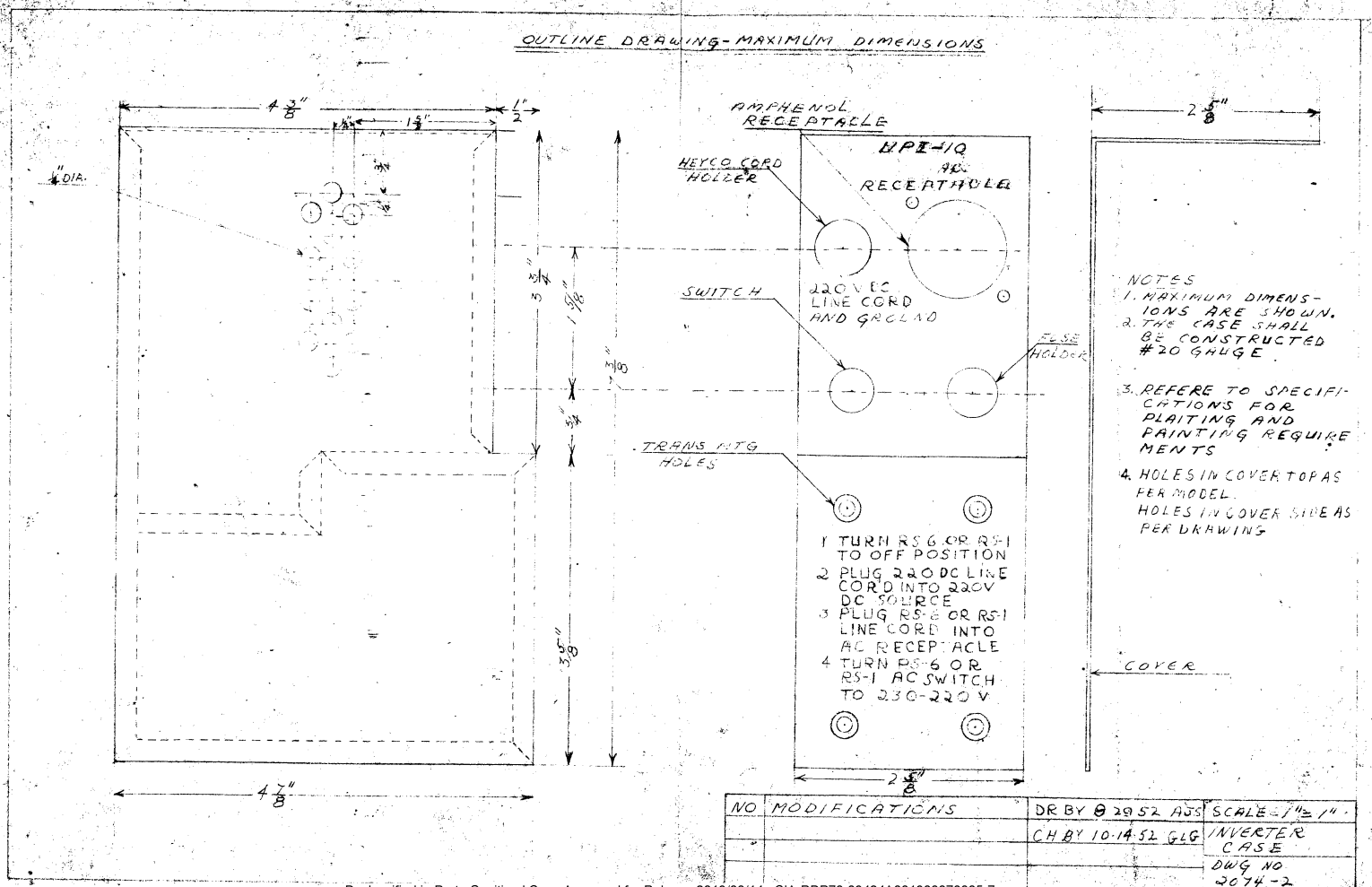
INVERTER PARTS LIST

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2074

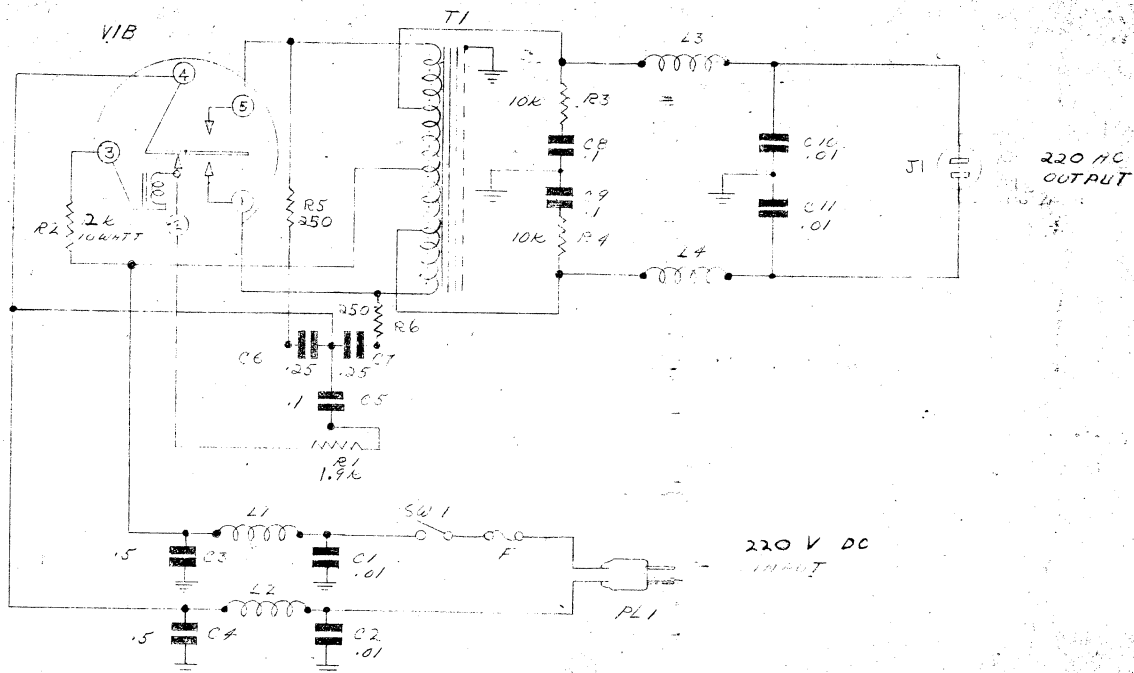
Reference No.	No.	Part	Description
80-1	1	Socket	Wafer, 5 Prong. (Chinch Jones 5WY)
	1	Terminal Strip	2½" x 2-5/8", See sample and specifications
	1	Terminal Strip	2" x 2-1/4", See sample and specifications
	1	Terminal Board	2½" x 3-1/2", 1/8" Glass Base Melamine, See sample
	1	Plug Adaptor	American to European (Wood Electric Co.) #2104
	1	Clamp	Vibrator
	1	Bushing	Strain Relief (Heyman Manufacturing Co.)
	1	Clip	Alligator type, (see Specifications)

OUTLINE DRAWING-MAXIMUM DIMENSIONS



NO MODIFICATIONS	DR BY 02952 AGS	SCALE - 1" = 1"
	CH BY 10-14-52 GLG	INVERTER CASE
		DWG NO 2074-2

CONFIDENTIAL



NO.	MODIFICATIONS	DR. BY 9-20-52 AJG	
		CH. BY 10-4-52 GLE	UPR-30

CONFIDENTIAL